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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,721	07/06/2004	Hiroaki Sudo	L9289.04146	6718

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STEVENS DAVIS LLP
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WASHINGTON, DC 20036

EXAMINER

BRANDT, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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04/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,721	Applicant(s) SUDO, HIROAKI	
	Examiner CHRISTOPHER M. BRANDT	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 28, 2008 has been entered.

Response to Amendment

This Action is in response to applicant's amendment filed on January 28, 2008. **Claim 13** is currently pending in the present application.

Response to Arguments

Applicant's arguments with respect to claim 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13 are rejected under 35 USC 103(a) as being unpatentable over **Yamada et al.** (US PGPUB 2001/0014091 A1, hereinafter **Yamada**) in view of **Takahashi et al.** (US Patent 5,881,099, hereinafter **Takahashi**) and further in view of **Okamoto** (US Patent 6,266,360 B1).

Consider **claim 13**. Yamada discloses a code division multiple access transmitting apparatus (paragraphs 92, 93) comprising:

a plurality of spreading sections that perform spreading processing separately for a retransmission signal using different spreading codes (figure 2, paragraph 94, read as legends 7-1, 7-2, 7-3, . . . , 7-M denote spectrum spreading modulators for generating diffusion codes mutually orthogonal with the M-string parallel signals);

a control section that detects a number of retransmissions for the retransmission signal and determines an uplink interference value obtained by the plurality of spreading sections based on the detected number of retransmissions (figure 2, paragraphs 94, 96, read as legend 16 denotes a control section for extracting from the memory the data which has been requested to be retransmitted based on a retransmission request signal obtained from the data detector, which the retransmission request signal also includes a measured uplink interference value to the mobile station);

a multiplexing section that multiplexes the retransmission signals spread by the plurality of spreading sections based on an uplink interference value (figure 2, paragraph 96, read as the multiplex number at the mobile station 1 can take values from 1 to M. For example, when the multiplex number is M, the parallel signals are transmitted to only the spectrum spreading

modulator corresponding to this number N (where N is an integer equal to or above 1 and less than M)); and

a transmitting section that transmits the multiplexed retransmission signal (figure 2, paragraph 94, read as legend 10 denotes a transmitter for superimposing a carrier transmitted from the carrier generator on an output of the adder, and for outputting a superimposed result from an antenna); and

Yamada discloses the claimed invention but fails to explicitly teach a degree of multiplexing.

However, Takahashi discloses a degree of multiplexing (column 28 lines 63-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Takahashi into the invention of Yamada so that the spreading code can be generated by utilizing the characteristics of the PN codes and the HF code (column 28 lines 63-67).

In addition, Yamada and Takahashi fail to explicitly teach a control section that detects a number retransmission for the retransmission signal, increases the set of degree of multiplexing as the detected number of retransmissions increases, and decreases a degree of multiplexing for the signals other than the retransmission signal spread by the plurality of spreading sections as the detected number of retransmission increases.

However, Okamoto teaches a control section that detects a number retransmission for the retransmission signal, increases the set of degree of multiplexing as the detected number of retransmissions increases, and decreases a degree of multiplexing for the signals other than the retransmission signal spread by the plurality of spreading sections as the detected number of

retransmission increases (column 13 lines 55-60, read as The packets are transmitted first at the maximal number of multiplexed data while the number of ACK signals is predominant. When the number of NAK signals increases and exceeds the preset ratio of 1:3, the number of multiplexed data is reduced to decrease the error rate of transmissions).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Okamoto into the invention of Yamada and Takahashi in order to enable the system to attain the maximal throughput (column 13 line 67).

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
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Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

April 2, 2008

/George Eng/

Supervisory Patent Examiner, Art Unit 2617